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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT PAPER NUMBER

2675

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/089,507

Applicant(s)

CORREA ET AL.

Examiner

Srilakshmi K. Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The following office action is in response to Amendment, filed June 14, 2004. Claim 7 was amended. Claims 1-8 are pending

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoi et al (EP 0 888 004 A2).

As to independent claim 1, Hosoi et al disclose a method for power level control in a display device (controlling brightness of a video signal, col. 1, lines 8-9) having a plurality of display elements corresponding to the pixels of a picture, wherein a power level mode selection process is used for increasing the peak white enhancement factor of the display (Fig. 3, items 110-112 multipliers), in which the power value of a video picture is measured (APL calculating circuit, Fig. 3, item 105, col. 9, lines 42-57) and a corresponding power level mode is selected for controlling the display contrast (Fig. 3, item 109, col. 10, lines 15-22, the coefficient setting circuit), wherein a picture is divided in a number blocks (col. 9, lines 48-50), wherein in each block the video levels or values derived from the video levels of the color components of the pixels are summed up in order to determine the local power values for the picture (Fig. 3, item 104, col. 9, lines 43-44), characterized in that a local temperature estimation is performed for the corresponding blocks of the display based on said local power values and the previously

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estimated local temperature values (col. 10, lines 3-14, col. 11, lines 25-29, where the average power determined by the APL for a block and the head generated by the PDP of said block are proportional to current flow required by the plasma element), wherein in the estimated local temp. values the maximum local temp in the display is selected (col. 11, lines 25-29, a predetermined limit), wherein a further step of maximum power level limit determination is performed based on the max. local temp and wherein the power level limit is used to restrict the range of the selectable power level modes in the power level mode selection process to power level modes having a power level below or equal to said power level limit. Hosoi et al do not disclose where the max. power limit is determined due to max local temp. It would have been obvious to one of ordinary skill in the art that max power limit is determined based on max local temp as Hosoi et al disclose where in order to prevent the driver ICs from being destroyed or damaged as the brightness is lowered when the max temp limit is closed to being reached (col. 11, lines 25-29).

As to independent claim 7, see limitations of claim 1, above.

As to dependent claim 2, limitations of claim 1, and further comprising, wherein for local temp. estimation of a block, the power dissipation not only of the local block, but also of a number of neighboring blocks is taken into account (col. 10, line 58-col. 11, line 29).

As to dependent claim 3, limitations of claims 1 or 2, and further comprising, wherein the maximum local temp. determination for the display is performed once in a number of video frames (col. 10, line 58-col. 11, line 29).

As to dependent claim 4, limitations of claim 3, and further comprising, wherein the steps of local power value determination and local temp. estimation are performed only for one or more selected blocks of the whole picture within a frame period (col. 10, line 58-col. 11, line 29).

As to dependent claim 5, limitations of claim 3 or 4, and further comprising, wherein a picture is divided in 40 blocks and the maximum local temperature determination is performed once within 40 frame periods. In an alternate embodiment, Hosoi et al disclose 32 blocks in col. 11, lines 40-52. It would have been obvious to one of ordinary skill in the art that Hosoi et al could have also had the amount of block divided into 40 as determined by the user.

As to dependent claim 6, limitations of claims 1-5, and further comprising, wherein the switching between maximum allowed power level limits corresponding to the determined maximum local temperature is controlled with a power level mode against picture power curve that falls if the picture power is increasing and that rises if the picture power is decreasing, and with a delay between falling and rising, respectively rising and falling if the change direction of the picture power value changes (col. 10, line 58-col. 11, line 29).

As to dependent claim 8, limitations of claim 7, and further comprising, wherein it is integrated in a plasma display device (col. 6, line 47).

Response to Arguments

3. Applicant's arguments filed June 14, 2004 have been fully considered but they are not persuasive.

Examiner would like to note that the claims originally filed and claims in the pre amendment are virtually the same with the exception of claim 7. Examiner has withdrawn the objection to claim 7. Claim 7 is now shown to be an independent claim.

In response to applicant's arguments of where the prior art Hosoi et al reference does not suggest or hint at the claimed invention, Examiner respectfully disagrees. The reference, Hosoi et al teach a circuit for controlling the brightness of the picture. In Fig. 3 and col. 9, Hosoi teaches a power level selection process used to increase the peak white enhancement and where the power value of the picture is measured. In col. 10, to control the display contrast a corresponding power level mode is selected. Hosoi et al teach dividing a picture into a number of blocks, where each block local power values are determined. Applicant argues where the present invention includes a second or additional control loop or circuit for providing the plasma display panel with thermal protection. Applicant does not claim a second or additional control loop. In regards to the limitations of the temperature estimation, wherein a further step of maximum power level limit determination is performed based on the max. local temp and wherein the power level limit is used to restrict the range of the selectable power level modes in the power level mode selection process to power level modes having a power level below or equal to said power level limit. Hosoi et al do not disclose where the max. power limit is determined due to max local temp. It would have been obvious to one of ordinary skill in the art that max power limit is determined based on max local temp as Hosoi et al disclose where in order to prevent the driver ICs from being destroyed or damaged as the brightness is lowered when the max temp limit is closed to being reached (col. 11, lines 25-29).

The above rejection is maintained and made final.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 703 306 5575. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, xxxx xxxx can be reached on xxx xxx xxxx. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Srilakshmi K. Kumar
Examiner
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SKK

March 6, 2004

A handwritten signature in black ink, appearing to read "Dennis Chow", written in a cursive style.

DENNIS-DOON CHOW
PRIMARY EXAMINER